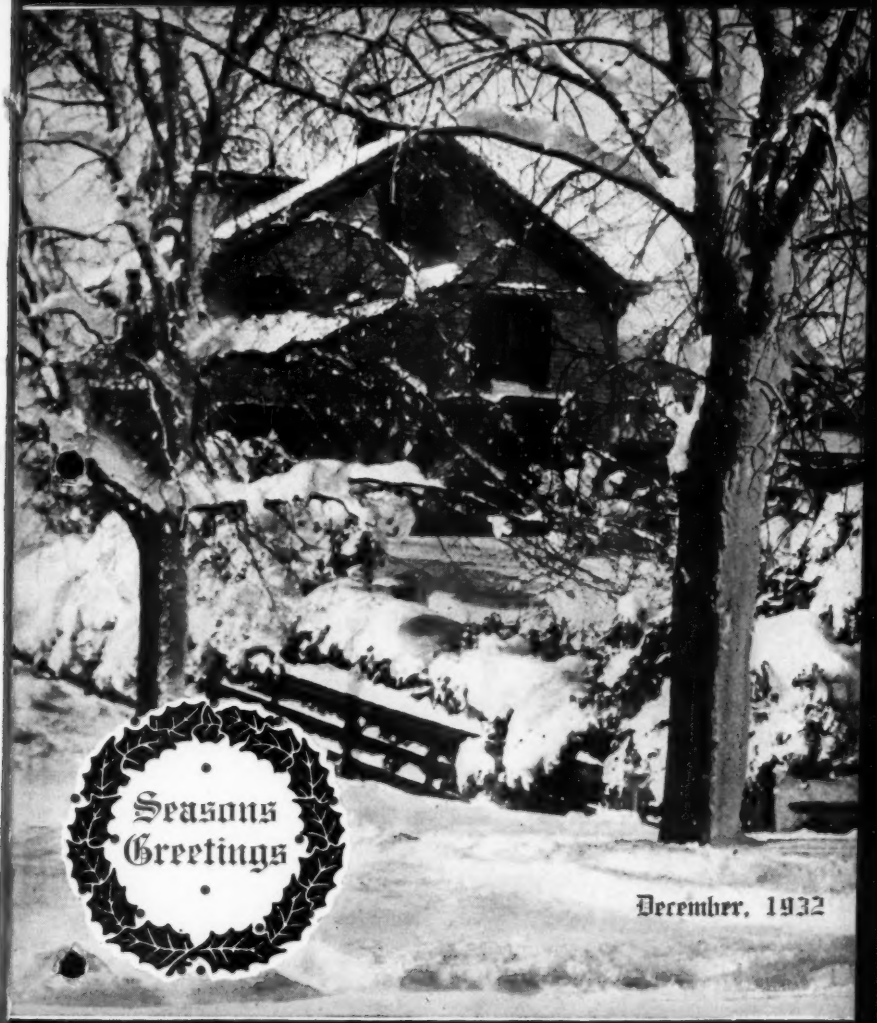
Electricity on the Farm

A Monthly Magazine for the Progressive Rural Family



December, 1932

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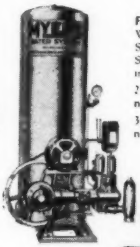

Fig 2510—Shallow Well, Automatic, Self-Oiling Water Systems. Ready to install.
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Fig. 2700—Deep Well, Automatic Self-Oiling Water Systems V-Belt or Silent Chain drive
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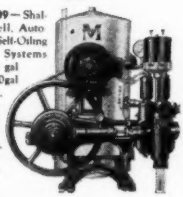

Fig. 2739—Shallow Well, Automatic, Self-Oiling Water Systems with 12 gal tank 250gal capacity, now $77.00
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Pumps, Water Systems, Hay Tools, Door Hangers

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Electricity on the Farm

December, 1932

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Advertising, in fact, automatically guarantees satisfaction to the buyer and pledges the integrity of the advertisers.

ADVERTISING BUILDS BUSINESS AND PROTECTS THE CONSUMER

DECEMBER, 1932

Life still hath one romance that naught can bury—
Not Time himself, who coffins Life's romances—
For still will Christmas gild the year's mischances,
If Childhood comes, as here, to make him merry.

—THEODORE WATTS-DUNTON (1832-1914)

Christmas is essentially a holiday for the young folks. If we are inclined to doubt this assertion, just recollect the reactions which the following produced in our childhood:

School vacation; the displays of gifts in stores; Christmas decorations, both in stores and in homes; buying gifts for mother, dad, sisters and brothers; getting and decorating the Christmas tree; hanging up of stockings and anticipating the visit of Santa Claus; the falling snow, with coasting and skating; arrival and welcome of visitors; and indoors—mince pies, plum puddings, nuts and candies, and the popping and stringing of popcorn, and in recent years, Christmas music by radio.

The home blessed with young folks is a home particularly favored for enjoying a truly merry Christmas, for making the youngsters happy has its direct reward, which it returns manyfold. Santa Claus provides the means of keeping the old folks anonymous, and thus increasing the surprise and pleasure of the children.

But back of all there must be the true spirit of Christianity, with its forbearance, its charity, good will and generosity. In addition to paying tribute to the youth, it is a time for reuniting families and friends, a time to forget injuries, and to heal wounds. And it is also a season for letting our friends know that we still think of them, and wish them well.

And may we take this opportunity of extending to our readers our sincere wish for a joyous Christmas and a year of health and renewed prosperity.

THE PUBLISHERS.

INVENTORY VALUE

Of Electrical Farm Equipment

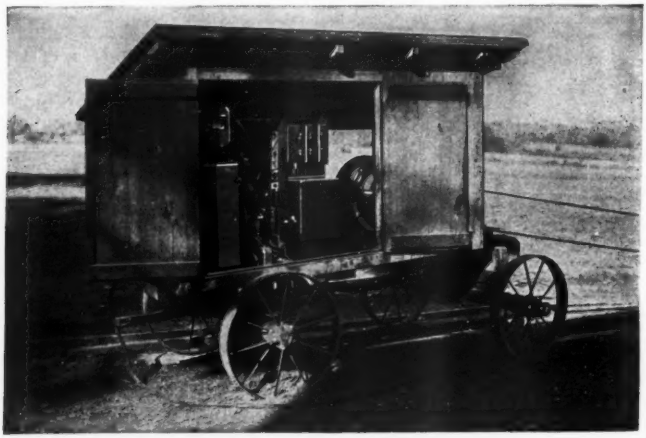
By H. C. FULLER

EVERY farmer should take an inventory once a year. There are many advantages. It shows his net worth, whether his business is better or worse off than the year before, and may be used as a credit statement for obtaining loans at the bank.

With the coming of electric service to the farm some new and interesting facts develop in the inventory. Some farmers have been inclined to consider electrical equipment merely as an expense. Quite aside from the value of the electrical installation as an everyday servant in the daily routine, the inventory will show that the purchase of wiring and equipment is an investment which adds greatly to the material value of the farm.

If you have not made it a practice to inventory all of your property once a year, start now. Decide on a definite date which is convenient, usually some time between January first and April first. If it is a poultry farm November first may be a better date. If you have not already developed a form for taking the inventory, your state college or the local farm bureau will be glad to assist you. Usually they can supply you with the necessary blank forms.

Generally speaking, equipment may be inventoried at its actual value on the farm. This may be determined by subtracting a reasonable depreciation from the original cost. On standard articles the depreciation may be figured from the estimated life. With



This is an old-fashioned portable motor, but it has had good care and careful storage. It is fifteen years old and still going strong, though hardly as handy as the modern types.

some of the newer devices, a higher depreciation may be charged due to probable obsolescence. The following examples are not intended to be an absolute determination but will serve as a guide.

The value of wiring depends on a number of factors. One of the most important is adequacy. If you gave the matter careful consideration at the time of installation, talked it over with a rural service engineer, and if it was installed by a competent electrician, it may be considered as part of the real estate. If the value of the house is included in the real estate inventory, the entire wiring job may be considered as an addition to the real estate, and increases its value to the extent of the cost. Generally, wiring is depreciated 5% for each year. If the estimated life of a wired building is less than twenty years, the depreciation rate on the wiring will have to be increased.

Motors

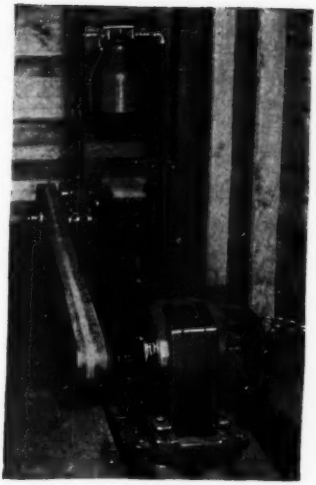
In this group include only motors which are not an integral part of the driven machine. This will include portable motors, shop motors and such others as may be readily detached from the base and used elsewhere. Where the motor has a permanent place on the machine it drives, inventory the machine as a whole. The rate of depreciation on motors varies widely. With ordinary wear and tear, motors should not depreciate more than 5% per year. However, if the motor receives no care, is unprotected from dust, corrosion, etc., the rate of depreciation will be higher.

Pumps

Pumps have become a standard article and do not depreciate rapidly due to obsolescence. A good pump should last at least 15 years. If the pump is too small for the job or is cheaply constructed, it may not last over five years. Judgment will have to be used in determining its inventory value.

Milking Machines

Many milking machines which were installed over fifteen years ago are still giving good service. It is difficult to determine a fair inventory value. No general rule can be given. Perhaps a fair value would be the amount you would be willing to take for it toward a new machine.



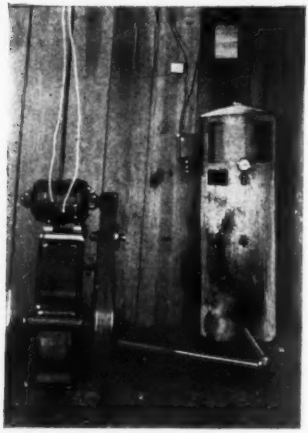
This milking machine is protected from corrosion and dirt. Its inventory value is much higher than it would be if it had been improperly installed.

Milk Coolers

Perhaps it would be well to consider the tank or other storage and the machine separately. They should be combined in the inventory however. If a dry box is used, which is well constructed, has high grade hardware, non-corroding racks, etc., it will probably last as long as the cooling unit. Many refrigeration machines have been in continuous operation for twenty years. Usually, if they are of the correct size and capacity, the expected life even of the light air cooled machines could be figured at fifteen years.

Incubators

No wholly satisfactory method can be given for inventorying this equipment. With good care and a



The water system, too, like other equipment, needs proper care to lengthen the life of the installation.

yearly overhauling, the life should be almost indefinite. However, every year brings new improvements and it is not likely that the depreciation should be taken at less than 10%. Perhaps it would be better to base it on the estimated sale value.

With the use usually made of the equipment on farms, the life should be long. If the machine has proper care, is installed in a dry, clean place, and if it is kept properly lubricated the depreciation need not be more than eight or ten percent.

Miscellaneous small equipment includes tool grinders, electric drills, fans, etc. With this type of equipment, the sale value drops rapidly and for this reason, even though the expected life be more than five years, the depreciation should be figured at about twenty percent.

The above suggestions may be varied to suit the individual desire in regard to the inventory. Some farmers would take the value as the "quick sale value," while others would distribute the depreciation equally over the life of the machine.

It will be seen that the installation of electric service on the farm will add very materially to the net worth. In some cases the general value of the property may be increased because of electric service by more than the cost of the installation. At any rate, the inventory will show that electricity on the farm is one of the best investments.

Another thing that the inventory will show is the advantage of proper care and maintenance of the equipment after purchase and installation. Prompt replacement of worn parts, proper lubrication, and an occasional coat of paint to prevent rust will add greatly to the inventory value of the equipment and will pay good dividends in better service rendered.

Heavy Consumption of Water

IF the herdsman for Lady Pride Pontiac Lieuwkje, the Minnesota Holstein cow that recently broke the world's record for combined milk and butterfat production, had been compelled to carry water for her in a bucket, he would have found it necessary to bring her 44 gallons each day, provided she drank 3.76 pounds of water for every pound of milk produced, which was the ratio recorded in a recent test at the Iowa Experiment Station. To do that Lady Pride's caretaker would have beaten quite a path between the well and her pen, but it is more likely he would have lost interest and quit his job long before the record was completed. Piping water to the cows and having it tempered for cold weather has been found essential to profitable production of milk and butterfat. The U. S. Bureau of Dairy Industry states that high producing cows frequently consume from 200 to 300 pounds of water each day. In tests at the Iowa station it was found that cows that had water before them at all times drank on the average more than 10 times each day and consumed 18.37 per cent more water and produced 12.12 more fat than cows that did not have water before them at all times.

State game farm endorses use of

ELECTRIC BROODERS

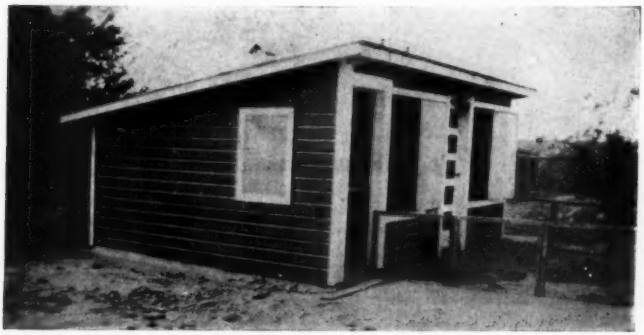
By D. B. LEONARD

FOUR hundred individual coops, each occupied by a hen hovering from 15 to 20 baby Chinese pheasants, is the unusual sight that greets the visitor early each year at the Washington State Game Farm at Walla Walla. Such a sight is about as uncommon nowadays as horses on Broadway and is in the same class for both are giving way to the inroads of the machine age.

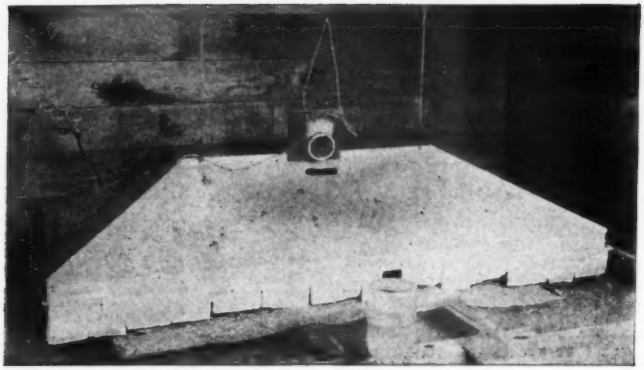
Up to 1930, Chas. A. Harmon, Superintendent of the Game Farm, brooded all the young pheasants, ducks, wilk turkeys, etc., according to Mother Nature's original plan, with the one exception that domestic hens were often substituted as mothers for the wild game birds. This plan required the maintenance all year of a flock of some 250 Rhode Island Red and Buff Orpington hens for hatching and brooding pheasants in the spring.

This number often proved inadequate and 700 to 800 additional setting hens were purchased last year from nearby poultrymen at a flat rate of $1.50 each. These birds besides representing a considerable cash outlay each spring had many other disadvantages. They brought to the Game Farm lice, parasites and poultry diseases which were readily transmitted to the young game birds to add to the already difficult task of rearing pheasants. The hens could not be sold at the end of the season for more than $1.00 each on the average, and the loss in value on purchased setting hens averaged about $400.00 each year. The labor problems alone would have been serious enough to make it impractical to care for 400 hens, each in separate pens scattered over the farm, had it not been for the fact that prison labor was used on the State Game Farm for these chores.

But things changed in 1930. In



Brooder house erected in 1930 to house Chinese Pheasants under electric brooders and to replace 50 individual coops where hens were used.



This brooder employed by Mr. Harmon on the Washington State Game Farm is equipped with temperature control.

the fall of 1929, Mr. Harmon visited in California where he observed a game farm using homemade electric brooders to rear pheasants. The brooders were giving excellent satisfaction in California so Mr. Harmon decided to build two brooders on a similar plan, erect a new brooder house and try brooding pheasants with electricity under his conditions. One 200-chick size ready-made brooder was also installed and operated splendidly. The homemade brooders were rather expensive to build, but operated very satisfactorily and reared 190 young pheasants from 215 placed under the hover on April 15th. This mortality rate of 11.6%, while it seems high when compared with domestic birds, in reality is low—in fact the lowest mortality ever

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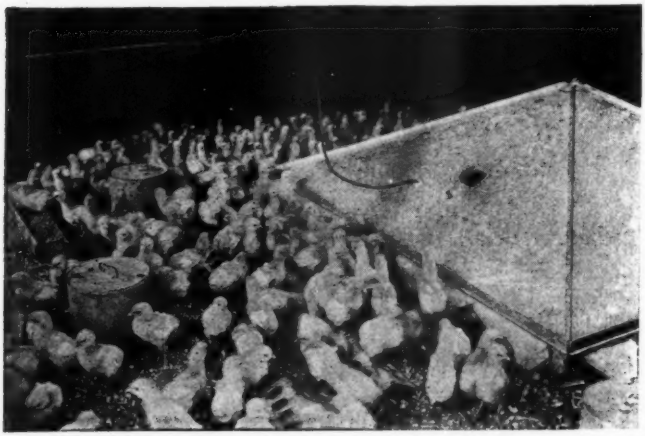


The electric brooder is the modern electric mother for the poultry flock. Its operating cost is moderate and a larger flock can be handled in less space.

Poultry saved by use of

BURGLAR ALARMS

By JOHN R. HASWELL
Extension Agricultural Engr., Pennsylvania State College

"WE have not had a bird stolen since the alarm was put in."

This is the unanimous reply from a number of Pennsylvania farmers who have followed the lead of the State Poultry Association in seeking protection. The Agricultural Extension Service at State College helped in simplifying equipment, standardizing layouts, and giving information as to installing. Some systems have been changed and developed at our suggestion during the past two years, but the college has produced no particular design as was indicated in the August issue of ELECTRICITY ON THE FARM.

Closed Circuit Alarm

The closed circuit alarm has always been advocated and was installed by all the men mentioned above. Equipment has varied all the way from complete manufactured systems installed by electricians, through parts bought by mail and installed by farmers down to junk relays, salvaged from old telephone systems.

When the alarm is set, there is always a low voltage current passing through the closed alarm loop out through the buildings. This energy may be the regular 110 volt alternating current stepped down by a good quality bell ringing transformer, or direct current from two or three cells of a home light plant, or several dry batteries. The voltage usually required varies from 6 to 18, depend on the relay used.

As the source of power for the loop is in the poultry house, as illustrated, Fig. 1, no protection for the circuit is required between the house and the dwelling because the alarm will sound if the circuit is either broken or bridged (short-circuited).

The relay, or electrically operated push button, makes the bell ring when the alarms loop is broken or bridged and the current stopped. A couple of dry cells furnish the current for the bell through an entirely separate circuit. When current stops flowing in the relay circuit, the relay

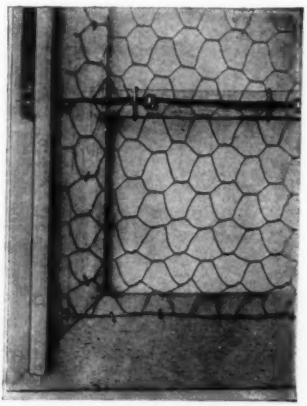


Fig. 2—Inside view of window showing wire of alarm loop between horizontal strip and poultry mesh. Lower clip of one radio lead-in is behind to left of vertical strip. Cannot be seen from outside.

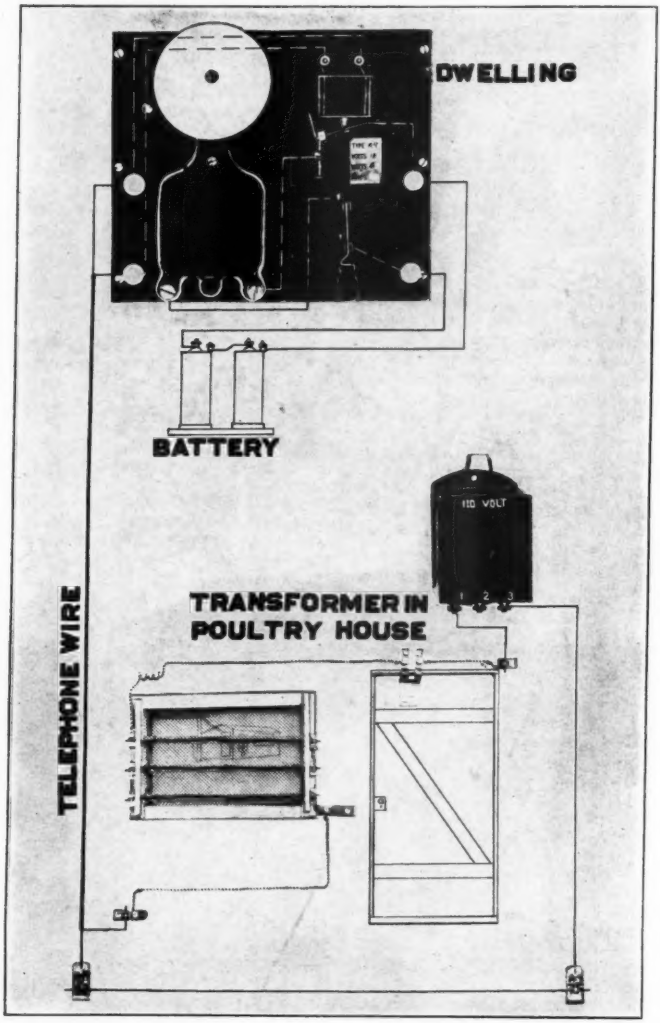


Fig. 1—Wiring diagram of alarm panel in dwelling with model of chicken house at bottom.

closes the bell and battery circuit, causing the bell to ring. A number of different types of telephone relays have been found satisfactory for direct current work and a few operate on either kind of current. High resistance relays are required so as not to consume much current. It is best, when possible, to adjust the relay so that it will *not* close itself when current again flows to it, but so that it has to be set by hand. In some cases a bit of wire solder must be put on the arm to make enough weight for good contact when it drops down to close the bell circuit. A self-setting relay will permit an intruder to enter the poultry house and by quickly closing the door to reconnect the relay circuit, thus causing the bell to cease ringing. To a heavy sleeper the self-setting relay might prove unsatisfactory. But when service interruptions are frequent the manually set ones may prove a nuisance because they must be reset after each interruption before they will again give any protection. Telephone relays are self-setting.

Guard Against Tampering

The use of a second bell ringing transformer in place of the battery to ring the alarm bell has its advantages, but occasionally the thieves disconnect the high line electric service and under this condition dry cell operation of the alarm bell would be best.

Commercial door contacts can be had about as cheaply as home-made ones can be made, but the ordinary ones do not give any contact for wires across the door. The copper plate on the home-made switch may be shut and bell wire looped back and forth across the door as much as necessary or two manufactured window contacts used at the top of the door.

Window protection, where there is poultry netting, is best accomplished by three lengths of No. 18 to 22 weather-proof wire spaced eight inches apart for the front windows. The wire is stapled to light wooden strips which are wired to the poultry netting in a horizontal position. See Figure 2. The ends of the weather-proof wire are straight and passed through quarter-inch holes in vertical strips on either side of the window frame. The connections between the pieces of weather-proof wire, are made with radio lead-ins having a clip at each end. The flat lead-ins have to be shortened to eight inches by folding. Of course, any spring clips connected by wire will do but the radio lead-ins are already assembled and when the bronze type are used will stand changes in temperature. Weather-proof wire is used across the windows because the ordinary bell wire would not stay insulated from the poultry mesh. Experienced wiremen have a saw cut in the strips in which to place the wire. On smaller windows only one strand of wire is taken across with a spring clip at each end. The bell wire should completely encircle the house and be securely attached with insulated staples so that the chickens cannot injure it. None of the clips back of the vertical strips at the sides of the windows have been displaced.

This alarm will ring when being set for the night if any doors or windows have been left open, and in that way is much safer than the open contact type. It costs $3.50 for materials to wire a 20x20 house, with $1.50 additional for every 20 feet. The various panels for the alarm system cost from $8 to $20.

Alarm Wiring Layout

The accompanying diagram shows the chicken house with the alarm loop completely encircling it. Other buildings may be attached in the loop. High line service is supposed to be available in the coop. The transformer may be replaced by a battery. The wire to the dwelling may be a double telephone cable with two wires in one cover. If the bell is attached to a panel on the first floor, a second one should be placed in

(*Continued on page 23*)

IN LIEU OF EYEBROWS

MARY E. WEBBER
Home Lighting Specialist
Nela Park Engineering Department
General Electric Company
Cleveland

NOTWITHSTANDING the popular belief that eyebrows were given us to pluck, wise old Nature had a more constructive purpose for placing them as She did. Some bright summer day you go out without your hat, and you'll realize that those eyebrows perform the very real service of shading and protecting your eyes from the bright light which is shining down from the sun.

Pure sunlight is so powerful that it forces you to shade your eyes, but the artificial electric light indoors taps you so lightly that you are unconscious of its blows. Nevertheless over a period of time if your eyes are subjected to bright artificial light-sources—bare lamp bulbs—you will reap the ill effects of retarded vision without recognizing the cause as eye-strain. Unfortunately eyebrows do not help to protect the eyes under indoor lighting conditions, for most of the home lighting does not come from above as sunlight but from portable lamps and wall brackets which are more nearly on a level with the eyes. So if you would be kind to your eyes and conserve their vision, it behooves you to find for indoor conditions a substitute for the eyebrows that help to protect your eyes in Nature's lighting. It's obvious enough once the *need* for shading eyes against bright light-sources is realized. Shades for the lamps, of course!

Fig. 1—These bedroom brackets originally turned down and had small glaring white glass shades. The present pleasing and efficient lighting result is gained by turning the brackets up and making these generous shields, which are painted a pale peach to harmonize with peach voile curtains and bound in blue bias binding that matches the rug color.

Shields Easily Made

And there are none simpler or more satisfactory to make than shades for wall brackets. The shield is the very easiest variety and when properly designed is often to be preferred, especially when the bracket is needed for useful light. Brackets, you know, are divided into two classes—those that must be depended upon to perform a definite lighting task (like lighting the face at the bathroom mirror) and those that are mere luxuries and lend live decorative touches on the wall areas. Now the shading treatment of a bracket depends upon which class your brackets belong in, for in the first case the shades must result in a better light-giving bracket, while in the second the only aim is a soft pleasing glow of light.

Let's consider the work job first. The primary principle in lighting

you must know is that larger light-sources result in more helpful, comfortable lighting, visually speaking. Good sized shields (that is as large as the bracket will take and look well) are accordingly a wise choice, for they throw the light against the surrounding wall area, which then becomes a secondary and larger source of light. The wall, of course, must be light colored to be a good reflector of the light. The shield must be not only generous in size but must bend back on both sides to conceal the lamp bulb. Shield frames may be purchased in the five and ten cent stores—or from any wire frame concern. They are simply attached to the socket of the brackets by a clamp which, when purchased, is attached to the shield frame.

Make Pattern First

To make a pattern from which to cut the parchment shade, lay the wire frame on a piece of old wrapping paper and merely trace it off. The parchment must be a near white translucent paper to obtain good lighting results. Did you know you can make your own parchment by getting a medium heavy drawing paper and rubbing it well on both sides with boiled linseed oil or a paraffin oil? The paper must be given twenty-four hours to absorb the oil before using. To color the shield, oil paints prove best, and they should be applied with a wad of cheesecloth, slightly moistened with turpentine, rubbing with a circular motion. The color, you remember, must be a very pale tint, and the lining should be left uncolored so that it may serve as a good reflector. After the coloring is done, the parchment is sewed to the frame by long overcast stitches close to the wire frame. To finish, use velvet, ribbon, or bias binding sewed around the frame with an invisible stitch on the front side and a long stitch on the back. Or the shade may be laced to the frame by punching holes in the shade ½ inch apart, ¼ inch from the edge, and using raffia, yarn ribbon or leather as a lacing. By running the lacing both ways a criss cross edge is obtained which is very attractive.

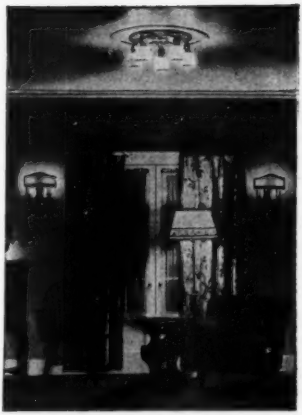


Fig. 2—These double wall brackets maintain their decorative purpose effectively, with shields which have sides fully three inches deep to completely hide the lamp bulb from view. They are fairly dark in color tone, to blend with the dark tan wallpaper, and pick up on the border and binding the predominant color in the room.

The wall brackets that have real lighting work to do are most often found in hallways, bedrooms, and baths, and they need 40 to 60-watt lamps. The bracket that exists just for its decorative value needs but a 15 or 25-watt lamp, and its shade may be smaller, more colorful (if desired) and made of a less translucent material.

Small Shades Popular

Small fitted shades (Fig. 3) are popular and effective. For these two rings are needed—one 3 inches in diameter with a clamp fitter to fasten to the lamp bulb, and one plain 4 inches in diameter (4 inches is a good proportional depth). A pattern must be made, directions for which may be found in the September issue of ELECTRICITY ON THE FARM in the article "Exit—Raw Light." The

Fig. 3—Decorative brackets in the dining room must have shades matching those on the central candle fixture, and the type used in this room seems very suitable.

finished shade should blend with its background and not offer a trying contrast—and is most effective when its decoration or binding picks up the color in the rug, draperies, or furniture upholstery.

Wall brackets can truly come into their own either as decorative or utilitarian lighting units when they are rightly shaded—to do the work of eyebrows in protecting and so conserving that priceless gift of eyesight.

Semi-Scalding of Poultry

By N. D. Herrick

SEMI-SCALDING is the name given to the scalding of poultry with water at a temperature between 127 and 129 degrees Fahrenheit. It produces better appearing birds than scalding with high temperature, which may discolor the skin. Scalding at lower temperature usually leaves the feathers quite firm, and makes the bird hard to pick as well as resulting in a large number of pin feathers remaining.

Semi-scalding has been practiced by larger poultry plants for quite some time, and is increasing in popularity because of the better results it produces.

Practicability Demonstrated

For the small poultryman, however, the man who has a roadside stand at which to sell his products, and who may have a call at any hour for dressed poultry, semi-scalding had not seemed practical heretofore. It had not been considered feasible to keep a scalding vat of hot water at the proper temperature so that it could be used at any time.

Recent experiments at the Cochituate Poultry Farm, Commonwealth Road, Cochituate, Massachusetts, have, however, demonstrated the practicability of keeping a scalder continuously at the proper temperature, with a moderate use of electric current.

When the subject of semi-scalders was called to the attention of Mr. Adrich, owner of the farm, his first question was,

"Who is using them?"

Then came the challenge,

"A machine that takes an hour to heat up is useless to me. I want a machine that will be at the correct temperature twenty-four hours a day. If it can operate on a reasonable amount of current, I'll be interested in it."

Current Consumption Moderate

The result of the suggestion was the development of a scalder with 3 inches of mineral wool insulation at the top, bottom, and sides. It was installed on Mr. Aldrich's farm. On test it used 53 kw. hrs. a month for continuous operation. At this moderate current consumption, the scalder proved very satisfactory. The ability to dress a broiler quickly on a minute's notice has increased the business at this farm considerably. Semi-scalding equipment is thus enabling Mr. Aldrich to get the maximum profit out of his poultry flock.

Rural Service Progress Depends on

PRIVATE ENTERPRISE

By W. J. PARVIS

INDIANA farmers receiving electric service in 1932 from rural electric lines are more than six times as many in number as those served nine years ago. Extension of lines into the country, almost entirely by privately owned utility companies, has been so rapid that every eighth farmer in the state now has available on his farm the electrical facilities commonly supplied in town or city. Two very important factors, voluntary reductions in rates by utility companies and establishment of the practicability of using electricity on the farm by agricultural experiment stations, have aided in this movement to extend electric service to Indiana farmers under conditions favorable to its extensive, economical use.

First Rural Extensions

Extension of electric service to any considerable number of Indiana farms first began during and immediately after the World War when several hundred miles of line were built. These lines were in many cases built by farm-owned stock companies of such materials as were available at that time. Many were built of iron wire since copper wire was very expensive and in some cases could not be obtained. After several years experience with the operation of such companies most of them were sold to privately owned utility companies. The majority of them had found that the costs for maintenance and excessive line losses (in several cases more than 50 percent) were so great that the necessary charge per kilowatt hour prevented the use of electric energy for any purpose other than lighting and operating an electric iron.

Many Uses Found

Utility companies, having taken over these early lines, found that because of limited use of electric energy on them, it would be impractical to extend their lines farther unless the costs of construction were paid for by the farm customers and an additional charge

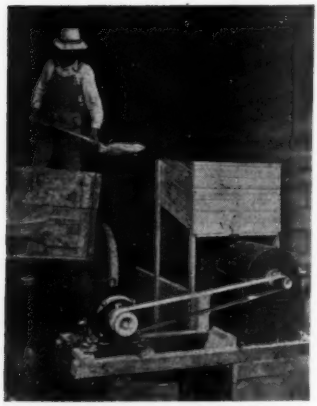
The young son of Mr. and Mrs. Fred Strawback, Kokomo, Indiana, enjoys the convenience of running water, supplied by an electric water system.

for maintenance be paid annually besides that for current. This annual charge amounted to 10 percent of the first cost of the line, and the cost per unit was that charged in the nearest town. Service was extended on this basis to hundreds of farmers until after results of experimental work conducted in Indiana and in other states showed that many uses of electricity for light, heat, and power were practical and economical.

Electricity Cheaper for Power

Results of these experiments indicated very clearly the important part which electricity might play in reducing power and labor costs on the farm, providing a clean, fireproof type of heat and satisfactory illumination. They showed that: the water supply, required daily, could be pumped more cheaply and with less attention by an electric motor than by any other power unit; the milking machine and cream separator were always ready to operate when the turn of a switch alone was required to start

Mrs. A. R. Smith, Swayzee, Indiana, cooks with an electric range in this beautiful modern farm kitchen.



Ira Nelson, Young America, Indiana, grinds his feed electrically for lower feed costs. The hammer mill is operated by a three horse power motor.

them, with a considerable saving in labor over hand methods; feed grinding could be done more cheaply at home, with all costs included, by an electric motor and feed grinder than where the grinding was done at the mill or by a travelling custom grinder; heating the dairy water heater, incubator, brooder, hotbed and seed-corn germinator more satisfactorily, with less danger of fire, and usually as cheaply, often more cheaply than by combustible fuels; winter egg production was increased by use of artificial illumination, with electricity as the cheapest, safest and most economical source of that illumination; the safety of and small amount of attention required by use of electric lights in farm buildings and yards resulted in fewer farm fires and considerable saving of time in doing chores and caring for lanterns.

Labor Saving Devices

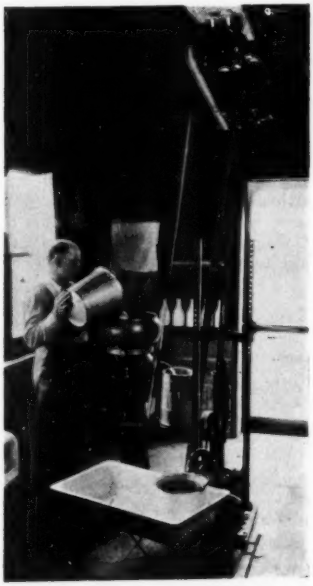
In the household the advantages and success of using electricity were well known, but the many labor-saving devices, the use of which was made possible by the

The electrified farm home of W. E. Logan, near Bringhurst, Indiana. Mr. Logan was one of the first rural electric customers to install an electric range.

farm electric line, were relatively unknown except the electric iron. Results of experiments and experiences of Indiana farm women have proven that: the electric range may be used very successfully with little more or no greater cost than that for coal and with a decided saving in labor; the electric refrigerator aids not only in preserving food for the farm, but may be utilized to economical advantage in storing cream, eggs, butter, dressed poultry, and other products which are to be marketed; the electric washer saves a large amount of very heavy work each week with the use of one-half kilowatt-hour; electric ironing machines are practical for use in farm homes and reduce labor in ironing with little extra cost for electricity; the farm woman has a greater need for electric appliances such as the sewing machine, churn, etc., than the city woman since her saving of time may enable her to devote more time to income producing activities such as poultry raising.

New Plans Formulated

As the results of these and other experiments became known and



The separator and pump jack are operated from a line shaft powered by a one-half horse power electric motor on the farm of O. C. Hendrix, Burlington, Indiana.

farmers interested themselves in these uses, Indiana companies formulated different plans whereby lines could be built more easily in order that farmers might be able to avail themselves of the advantages of using electricity in their work and in their households. As a result of this forward step, more than 22,000 Indiana farms were receiving electric service from farm electric lines as of January 1, 1932. Nine years previous to that time, less than 4,000 farms were so served. With the exception of a few hundred farms all of those now having service available are served by privately owned companies.

Much to Be Done

There are still many questions to be solved, such as satisfactory rate schedules, types of lines to build, additional uses for the service, etc., but by patience and cooperation, they can all be worked out. The important consideration is that there shall be no interruption to the development program which is being carried out. It is highly important that farmers realize what has been done and what still remains to be finished before the majority will have electric service.

Soon, the question of bills favoring municipal ownership of electric utilities will again be before the legislature. Farmer members who have not studied the question may feel that it is a city problem of no concern to them. On the contrary, it is of greatest importance as it may mean the difference between going ahead or stopping the rural extension program.

Cities Neglect Farmers

Cities which operate electric plants do so for the benefit of their citizens. They do not take much interest in affairs out in the counties. They have not in the past sponsored any research projects nor have they, except in a few instances, shown any inclination to serve farm business. Their plants and lines, being tax free, increase the burden of county and state taxes on the farmer, and no effort is made to develop the market so that the use of service may be enjoyed by still a greater number of farmers.

In the meantime, farm leaders should realize that it is not a matter of electric service to a few farms around or near a city, but rather a question of bringing drudgery relief to as nearly all the 181,570 Indiana farms as is possible, and as quickly as it can be done.

An experiment in threshing with electric power on the farm of Tom Murtaugh, near Lafayette. A ten horse power motor was used successfully. Note the recording instruments used in the test.

ELECTRICAL HOUSEKEEPING

Conducted by
GAIL MEREDITH

Shopping Round

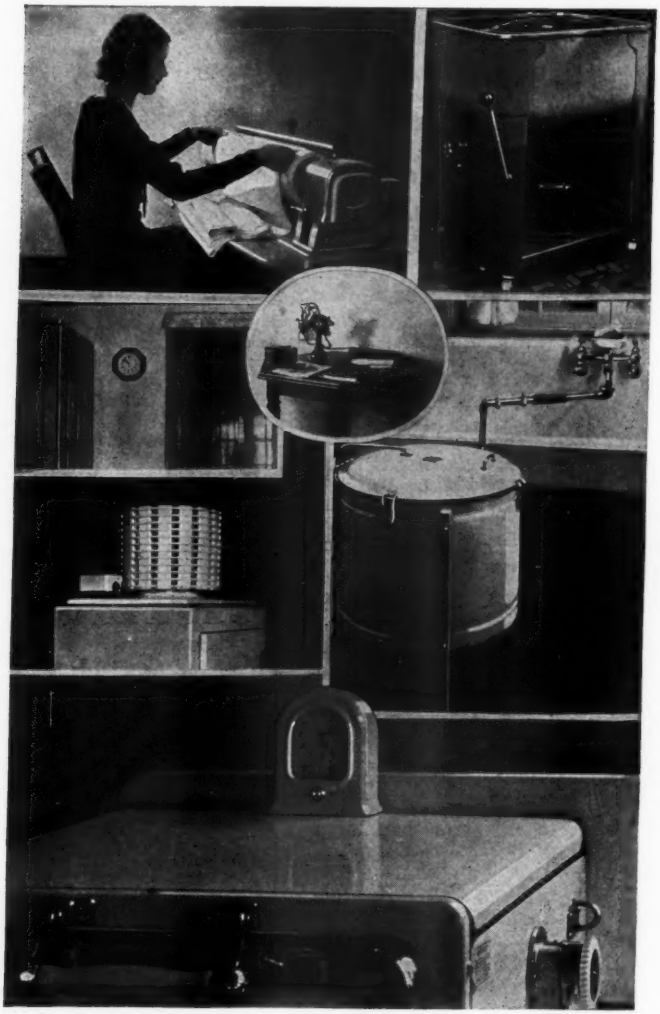
SCARED money crawls out of all sorts of hiding places around Christmas. For shrewd investors know that gifts to those they love are enduring, profitable investments, free from danger of foreclosure or loss and yielding ever growing dividends of love and gratitude.

Perhaps there is just a little more emphasis on "something useful" in years like this, and Father is sure to drag out his timeworn "Don't get me much this year, I really can't afford a present." But most of us have managed to save up something to spend for Christmas.

The children always come first on Christmas lists, don't they? Shopping for them takes you all over town, for gifts are everywhere. You find caps and balls, doll carriages and blocks, tool chests and dolls that really walk. But there are other things, too. In all the department stores and specialty shops there is pretty sure to be a special corner somewhere devoted to electric toys. You may not be able to get up to it—not just at first, for there is sure to be a ring two or three deep around the table. If you wait a little and push a little, though, you can get near enough to see the toys after a while. Electric trains swish around corners and roar through tunnels at a most entrancing speed. Signal lights flash and semaphore arms rise up and fall at the touch of a button. Oh, there is no wonder that Dad gets so much fun out of Christmas when he buys an electric train.

But you cannot play with trains all day for maybe some of your boys are girls, and girls care lit-

Children, too, will be delighted with electrical gifts.



Labor saving appliances such as those suggested in the above illustrations make excellent Christmas gifts. They are bound to bring joy to the housewife.

tle for trains. So just wander over to another table where there are tiny electric ranges that sister can plug into a convenient outlet and really use. The burners on top and in the oven will get hot and the tiny pots and pans are just the right size for a husky family of dolls.

But perhaps the boys have outgrown trains and the girls no longer play with dolls. If the boys like to putter around the farm shop an electric drill or an electrically heated soldering iron will modernize the job of tinkering and keep them interested at home. There is no end to the fascinating things for girls: lamps and clocks for their room, a hair dryer or a curling iron. If they are away at school, they will appreciate a little traveler's iron, a heating pad, or maybe an electric grill for their secret midnight snacks.

Gifts for All

Nor are gifts electric confined to the children. Not at all; they just begin there. For grandmother there is a small reflector heater to take the chill off her room by day, or a fleecy heating pad to warm her toes by night, or a clock with a lighted face that shows the passing hours all night long.

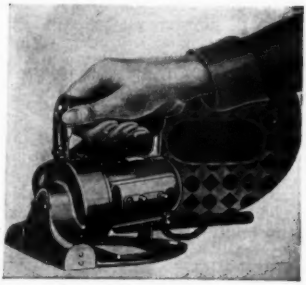
For grandfather a special reading lamp that throws a good strong light on the paper when he reads.

Aunt Mary may want a toaster or a percolator, a waffle iron, or an electric tea kettle that boils fresh water for tea.

If you really want to surprise Dad, who probably is expecting nothing more exciting than socks and ties and handkerchiefs, get him a tiny electric heater to put under the hood of the car on zero nights, so it will start without balking in the morning.

And when anyone asks you what you want for Christmas, begin with a dishwasher and name everything up to a refrigerator, not forgetting the new 1000 watt feather weight irons nor the small ironing machines.

For when you get gifts that



Other gift suggestions

run by electricity, you get something that furnishes power for the jobs that tax your strength; something that furnishes heat without wood gathering or ash emptying, light without oil to carry and pour and wipe up; something that spells comfortable modern living.

That is nice to give or get for Christmas, isn't it?

• • •

Light Up for Christmas

WE seem so much nearer to the stars out here in the country than they do in town that we have felt less need to string our houses with lights at holiday time. But when you stop to think about it, however near they seem, we cannot pick off the littlest, nearest and friendliest star to trim our Christmas trees or twinkle over our doorway at our neighbors as they pass. We have to use store lights, too, if we want to dress up for Christmas.

It has been years since Christmas candles gave way to the safer lights from strings of tiny electric lamps. But Christmas tree lights are only one way of using the safe loveliness of light for decoration. There are candles to set in the window on Christmas Eve, single candles, triple candles, a whole row of candles mounted together on a narrow board, all with little flame-like bulbs at their tips, and all burning away throughout the holiday time without replenishment or attention, and using so little electricity withal that it would take each little candle with its 8-15 watt bulb over 60 hours of burning to use up one single kilowatt hour of current.

Sometimes these candles are set in a socket attached to one of the gay artificial wreaths we love to hang about. They can be fixed firmly in a wreath of pine as well. Some folks twine a string of colored lights through their wreaths. If they are to be used out of doors, for either wreaths or trimming growing trees, these strings come with a special rubber cord that shuts out rain or snow or sleet from the copper wires that carry the electricity.

Each year there are lovelier things to choose from, and these last few years, they have been cheaper than ever so they do not make expensive decorations.

The people who live in this house in the picture have scattered

This little Christmas tree looks both ways, outside and in. The wreath with its string of lights makes a beautiful frame for the window.

This house says Merry Christmas.

their lights with a lavish hand. You can imagine how gay their Christmas is going to be. Perhaps a married son and his family are coming home for Christmas. There will be little children, and stockings hung by the fireplace. The lighted trees are gay for them. Perhaps there will be a son and daughter from college. They will have hung the wreaths in the windows, and climbed to the attic to fix that single lovely star upon the roof.

The love and happiness that fling that gay shower of light in friendly gesture through the darkness are sharing Merry Christmas.

"Incubated" Cranberries Show Keeping Quality

TESTING cranberries in "incubators" has proved a reliable method of forecasting their keeping quality for the season in Massachusetts.

The incubator test, begun several years ago by Dr. Neil E. Stevens, of the United States Department of Agriculture, consists of keeping pint samples of cranberries in an electric incubator for a week early in the picking season. They are kept warmer than in ordinary storage and this hastens the ripening and decay which normally occurs over a longer period. The spoilage of the samples indicates approximately the general spoilage to be expected in storing the crop. The keeping quality of the fruit varies widely from year to year and the tests aid growers in deciding how best to handle the crop.

The weather during the growing season has a pronounced effect on the keeping quality of the cranberries. The best combination appears to be cool weather in May and June followed by relatively dry weather in July and August. The worst combination was a warm May and June followed by a rainy July and August.

Burglar Alarms

(*Continued from page* 15)

the bedroom. It is connected in parallel, i. e., the two wires from the second bell are connected to the two binding posts on the bell shown.

If the poultry house is within easy hearing of the dwelling, it may be necessary to use a buzzer or muffle the bell. Some thieves have escaped when they heard the alarm sound. In another instance, in a small town, four houses were looted and the chickens all bagged when an alarm went off as the fifth house was entered and all the chickens saved.

Questions and Answers

Conducted by H. J. GALLAGHER
Agricultural Engineering Dept.
Michigan State College

Question: *I have a small 110 volt immersion water heater. The nameplate does not indicate how much current it uses. How can this be figured on a meter marked "W. H. per disc rev. 5/12?*

Answer: The marking "W. H. per disc rev. 5/12" means that each time the meter disc makes a complete revolution, 5/12 of one watt hour of energy is consumed.

Proceed as follows:

1. Disconnect all lamps and appliances, except the water heater.
2. While the water heater is operating, count the number of times the black spot on the meter disc passes the meter window in one minute. This gives the disc revolutions per minute.
3. Multiply the disc revolutions per minute by 60 to get the disc revolutions per hour.
4. Multiply the disc revolutions per hour by 5/12 (watt hour per disc revolution). Result is the number of watts per hour used by the heater.

Example: Suppose the disc revolutions are 20 per minute. 20 x 60 = 1200 revolutions per hour; 1200 x 5/12 = 500 watts per hour, demand of heater.

To determine the W.H. per disc revolution on meters which are not so marked, proceed as follows:

1. Disconnect all lights and appliances.
2. Connect 1 lamp of known wattage, as a 50-watt lamp.
3. Count disc revolutions per minute while lamp is burning; multiply by 60.
4. Divide 50 watts by discrevolutions per hour. Result is the W.H. per disc revolution.

Example: Suppose the disc revolutions are 2.5 per minute with one 50 watt lamp burning. 2.5 x 60 = 150, 50 watt (lamp) divided by 150 = 1/3. On this meter, the W.H. per disc revolution is 1/3.

• • •

Question: *I would like full instructions for changing the direction of a split phase, A.C., motor, ¼ h.p., 60 cycle 110 volt. We have been using this motor for running a two-hole corn sheller where sometimes the load is enough to drag heavily. Will this harm such a motor?*

Ernest L. Burdick

Answer: In the split-phase motor, there is a starting winding and a running winding; to change the direction of rotation, interchange either the starting winding connections or the running winding connections. The most convenient way to do this is to interchange the two wires on the binding posts of the motor which connect to the service line.

Whenever a motor is subject to an overload, there is danger of injury to the motor. In the case of the split-phase motor, it cannot start or operate as heavy overloads as can the repulsion-induction type motor. Consequently, it is more subject to overload injury, especially in starting a load.

• • •

Question: *We have a tennis court about 88' by 45', with poles on each corner and in the middle of the ends and sides, about 13' high.*

Could you please tell us the cheapest and most efficient way to light this court?

O. Arthur Wolcott

Answer: It would be relatively

(*Continued on page* 34)

WHAT'S NEW

Reviewed by TRUMAN E. HIENTON

Electric Steam Boiler Dairy Sterilizer

DAIRY equipment used in handling milk should be sterilized by all farmers engaged in milk production, and must be in many states according to the dairy laws of those states. Sterilization by steam is a common practice although a relatively small percentage of the steam generated for this purpose is now produced in electrically-heated steam boilers.

An electro-steam boiler dairy sterilizer designed to provide ample quantities of hot water and live steam for the dairy is now being introduced by a northwest public utility company. The heater, controlled by an automatic pressure switch, adjustable up to 100 pounds steam pressure, is turned off when sufficient steam is generated. The boiler is insulated with 4 inches of diatomaceous earth insulation and is heated by an electric heater of the immersion type.

Cushioned-Power Vacuum Cleaner

Quietness of operation and efficient cleaning feature a new cushioned-power vacuum cleaner Four sturdy rubber cushioned posts connect the motor housing to the supporting frame and help in absorbing vibrations and reducing noise. A moulded rubber gasket between the motor support plate and base of the cleaner keeps dust and dirt out of the motor, while another rubber gasket controls the circulation of air that cools the motor. The aluminum suction fan has low, tapered, and curved blades and is balanced for quieter operation. This cleaner has a ⅛-inch nozzle adjustment for rugs of different nap thickness and a large nozzle opening. The brush is of a self-cleaning rotary type and the cleaner is equipped with four rubber wheels, a foot controlled handle lock, and a chromium plated handle.

Fractional Horsepower Capacitor Motor

A fractional horsepower capacity motor is now offered with a built-in capacitor, bringing the appearance of the motor to a conventional form. There is no outside capacitor as it is built inside the motor frame. This motor is manufactured in rigid or rubber mounted horizontal type, also in various vertical types. Sizes include ⅛, 1/6, 1/5, ¼, and 1/3 for 110 volt, single phase, 60-cycle operation. These are furnished either with waste packed sleeve or double sealed ball bearings.

Detector Mazda Lamp for Christmas Tree Lighting

An answer to the perplexing problem of determining which lamp is burned out in the string of lamps on the Christmas tree is to be furnished by a new Mazda "Detector" lamp which continues to glow after failure. This lamp with the regular miniature screw base has a larger bulb and is of a new flame shape. It is designed for series burning in strings of eight sockets each and on 100-25 volt circuits either a.c. or d.c.

Coated in colors of red, green, blue, orange, or white are these lamps except for a portion of the glass bulb near the base of the lamp. Due to the presence of a small amount of neon gas the characteristic neon glow easily locates the bad lamp, when a lamp failure throws the entire string into darkness.

ON THE AIR

Conducted by
JEROME J. HENRY

When They Face the Mike

HOW do the radio personalities act when they face the mike? Observing various CBS performers, the following facts were gleaned:

Announcer Don Ball bobs up and down on his feet. Tony Wons always sways to the rhythm of the verse he reads. Colonel Stoopnagle and Budd totally ignore the microphone. They simply carry on their line of chatter, and if the microphone cares to listen in it's all the same to them.

Ruth Etting stands with her hands on her hips and likes to have the microphone placed so she can sing down to it. Frank Knight, announcer, likes to have his papers on a music rack, so he can gesticulate with both hands. Burns and Allen work behind a screen in the studio because they prefer to concentrate on the microphone.

Morton Downey practically hugs the mike when he's singing, and Edwin C. Hill won't start a broadcast without having a glass of water before him. Yet, he seldom, if ever, touches it.

Pat Burns. He has been a radio actor and announcer since 1924. In 1927 he won a silver cup which designated him the most popular announcer of the country. He's responsible for a good share of the words that are on the air. How many characters does he enact in his sketches? Well, it must be two or three dozens.

• • •

Stock Show on Radio

COMPLETE reports on the winnings of many of America's finest herds, flocks, and crops will be given in broadcasts each day during the National Farm and Home Hour direct from the grounds of the International Live Stock Exposition in Chicago.

The International this year begins on November 25, and will continue into early December.

• • •

Packing a Thrill in the News

WHAT'S happening? In answer to this question in which every American is interested the Columbia Broadcasting System and Time magazine are again on the air with a weekly program dramatizing the news happenings of importance. Presented in a vivid, brief, and accurate description, the front page stories of the week are brought to radio listeners each week.

The programs are on the air Friday evenings. During the half hour resumes of practically every important event are put on the air. Radio actors become famous personages who participate as the principal characters in the news for a few moments.

Known as "The March of Time," the program last year gained a wide following among those who enjoyed hearing excel-

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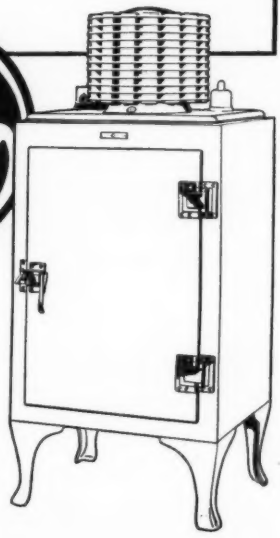


THE General Electric Monitor Top Refrigerator sets the standard of refrigeration excellence—yet provides the lowest cost refrigeration you can own. Today, one out of every three homes with modern refrigeration has a G-E Monitor Top. Every moving part of the simple mechanism is hermetically sealed within walls of ageless steel. It is safe from neglect or abuse, and requires no attention, not even oiling.

The lifetime convenience and economy of this famous refrigerator can be brought to your home for as little as $7.00 down, with monthly payments as low as $7.00.

General Electric Company, Electric Refrigeration Department, Section CZ12, Hanna Bldg., Cleveland, Ohio.

General Electric models also include the G-E Junior —outstanding value of the low price field.

GENERAL ELECTRIC
ALL-STEEL REFRIGERATOR

lent reports of current events and at the same time a finished radio drama of unprecedented action.

• • •

G. E. Program on Radio Five Nights Weekly

HEYWOOD BROUN, Albert Payson Terhune, Bruce Barton, John Erskine, and Emily Post head the cast of characters in the new G. E. Circle now heard five nights each week, over an NBC network, at 6:45 p.m., Eastern standard time, on Mondays, Wednesdays, Thursdays, Fridays and Saturdays.

Each of the distinguished group of writers is heard in the role of speaker in the programs with the exception of Heywood Broun, who acts as news commentator and master of ceremonies.

• • •

Al Jolson Starts on Radio

THE first star of the talking pictures, Al Jolson, is now heard on the radio.

Musician, actor, and comedian, the famous artist started last month over an NBC network. His program each Friday evening is heard at 10:00 o'clock, E.S.T.

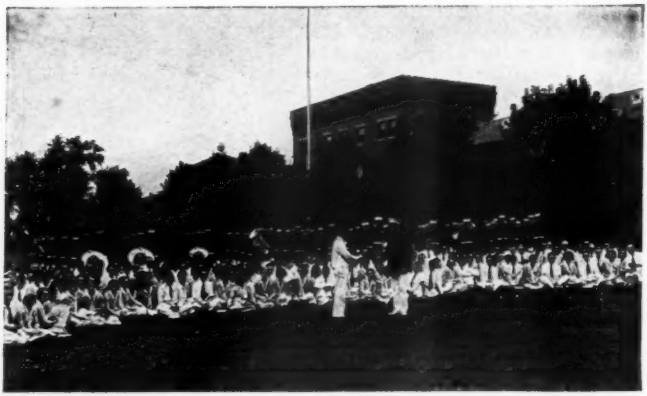
Jolson is a mixture of a big boy and serious minded business man. He loves football, baseball, and wrestling, airplane rides, and an abundance of company. At gatherings he is always the center of attention, cutting up like a school boy, singing and joking.

Bubbling over with energy, he nevertheless finds no time to write letters, and, as a consequence, is often found hopping in and out of telephone booths and telegraph offices.

• • •

Veteran Troupers on Showboat

BENEATH the burnt cork that covers Mollasses and January, black faced comedians on Captain Henry's Showboat, lie the features of two veteran minstrel men whose long experience has fitted them for the roles with the Show Boat program heard over an NBC network each Thursday evening. Pick Malone and Pat Padgett, who perform as these two char-



Thomas Wilson Chamberlin, outstanding 4-H club member of Coles County, Illinois, is shown here presenting a baton to Captain Taylor Branson, conductor of the United States Marine Band. The gift was made in appreciation of the concerts by the band which are broadcast each month in the National 4-H club program. Scene was taken at the club camp at Washington, D. C.

acters, have been troupers for years.

Malone, who is heard as Mollasses, is a native of Dallas, Texas, who joined a stock company when he was 17 years old. Padgett is from Bogard, Georgia. He started his career in "home talent" minstrel shows.

• • •

Studio Chatter

BEN BERNIE'S now famous slogan, "Come Home, Prosperity, All Is Forgiven," has been set to music by Irving Caesar, an old friend of the conductor.

Ed Wynn says he knows a debutante who came out in 1929 and hasn't been in since.

A brand new style of spelling came to the NBC studios recently when a letter was received addressed to a station at "Minniyapple, Miniysoade."

Gene Austin wanted to become a wrestler when he was a boy. So he studied hard, "until," in his own words, "I was matched with a perfect novice who threw me all over a 40 acre lot."

Colonel Stoopnagle paused to ask if Esther Leaf is from the same family tree as Ann Leaf.

The Boswell Sisters recall as one of the most embarrassing moments of their lives the day they were presented to President Hoover as the "Ambassadors of Harmony" and "all good democrats."

During his "Meet the Artist" interview over CBS stations, Georgie Price was asked if he owned a radio now that he was firmly established in the broadcasting realm. "No," Georgie replied, "because I'd always miss the best program on the air anyway."

Ray Perkins, looking over the events for the 1932 Olympics, found several contests missing. Additional events, says Perkins, should be Standing Broad Hint, Running for Office, Ear Boxing, Wrestling with Temptation, Juggling Figures, Street Crossing, and Half Shot Put.

Chic Johnson of the team of Olsen and Johnson, heard with Rudy Vallee's orchestra, nearly caused a riot in the studio just before one of the programs was to go on the air. Chic minced out in front of the audience in the studio, gave an exaggerated bow and removed his battered high hat. A pigeon flew out and fluttered around the studio until Ray Kelly, a sound expert, removed it to his laboratory.

• • •

Word was passed along the water front that Phillips Lord, "The Country Doctor" and "Seth Parker" of radio, was in the market for an old-fashioned three masted sailing vessel. Lord's office received a call from an old sea captain who wanted to sell him a tug boat and a string of barges. Later in the day a wire came from Captain Joe Peterson who had a canal boat and four mules, but when an "Inventor Professor" offered to build a private submarine at practically cost, Lord decided to cancel all orders for boats.

Clip cows, save time More profit

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Enjoy bigger milk checks . . . Get more milk, cleaner milk . . . Save grooming time . . . by regular clipping. Do a better, quicker job the easier one-man way.

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It's the world's fastest, finest electric clipper. Great reserve power. Easy grip and perfect balance in any clipping position. Quality throughout. Ball-bearing tension keeps plates sharp twice as long. Plugs in any light socket; or runs from auto battery. 20 feet rubber covered cord. Fully guaranteed by world's largest, oldest established maker of clipping and shearing machines. At any dealer's, or sent direct; $2 with order, balance C.O.D. In ordering, describe current. Other machines $11.75 up. Chicago Flexible Shaft Company, 5524 Roosevelt Road, Chicago.

Only **$17**

Complete with Universal motor for 110-120 volts. Special voltages slightly more. Specify available current. Aluminum handle model $18

Satisfaction or Your Money Back

Letter Contest Winners

Below is given the winning letter of the $25.00 cash prize on: "How the magazine ELECTRICITY ON THE FARM, has helped me."

ELECTRICITY ON THE FARM has helped me because it induced me to BUY—

Two electric motors and pumps to supply running water.
Electric motor for separator
Electric washer
Electric range
Electric iron
A radio.

Also because it has created a desire to BUY—

An electric refrigerator
Electric milk cooler
Electric grinder
Electric ironer
Electric churn.

By inducing me to buy these things it has relieved me of household drudgery and brought conveniences and comforts to our home which I did not dream were possible on a farm. It has also added pleasure and profits to our farm operations.

NELLIE WEBB ALCORN
Webbwood Springs Farm
Delaware, Ohio.

* * *

The following letters have been awarded $2.50 cash prizes:

To me, a farmer's daughter, the little magazine, "Electricity on the Farm," contains all the secrets of the old fairy tales of my childhood.

Having peeped between its covers, to good purpose, our combined savings have induced Santa Claus to bring us electric lights—clean and safe, the sun bowl, glowingly warm on a frosty October morning, and third, the electric range, marvel of marvels.

Now its pages are coaxing us to investigate prices and benefits of the electric refrigerator. Electricity is the good fairy that makes all things possible for the fortunate investor.

HELEN D. WHITE,
617 Chapman Street,
Canton, Massachusetts.

* * *

Your magazine has helped to solve problems I thought had no solution. First, the economical use of the electric range. Short cuts in ironing, heating and baking have added to my leisure hours. Placing hot and cold water in the house, making possible the modern bath room. Convenient lighting of house, dairy barns and hen houses, increasing the profits from these. Had I at my command the helps brought to me by "Electricty on the Farm" when my children were small many marks of age caused by hard work and worry would not be in evidence.

MARIE L. FLAHERTY,
Willow Creek, Mont.

* * *

The handy little monthly magazine, "Electricity on the Farm," has been most beneficial to me. By filling out a coupon in it I attracted attention to my district, accelerating the installation of an electric line. What more can be said for any magazine than that it gave to me one of the greatest conveniences, electrcity? Though it advertises electrical appliances, it does not sacrifice information for the purpose of praising advertisements. Here's to a good little magazine; may it aid everyone as it did (and still does) aid me.

HARVEY C. MOORE,
R.D. 2,
Middletown, Del.

* * *

Electricity is here to stay and makes life worth living. Its serving qualities increase daily. Its value is incalcuable. I am a grange lecturer and P. T. A. worker. I arrange a program weekly. This little but powerful magazine, "Electricity on the Farm," is a continual aid in supplying me with educational material, humor, house planning, health ideas, farmers' helps, gift suggestions: in fact, useful knowledge of many phases pertaining to the harnessed power of the world.

Even though the "tiniest magazine" in our home, it is the most completely read for its concise but practical contents.

EDITH S. GARWOOD,
Haddonfield, N. J.

* * *

Your magazine has shown me how I can adapt electric service to the operations on the old homestead, and economize on hired labor and still make the results of my own labor more efficent and productive with less work during my declining years.

The old type farm buildings were not built on the efficient

plans of the modern ones, and it was not till I began reading your "Electricity on the Farm" did I see that what other farmers had done with electric labor savers under similar conditions I could do, and plan to put that service to work for me.

G. Carlton Townsend,
1947 Taylor Street,
Hollywood, Florida.

* * *

I am a boy, reared amidst the hardships of a Mississippi cotton farm. "Electricity on the Farm" has opened my eyes to the joyous comfort and increased profit that electrical appliances can bring to me and my family on the farm.

Thanks to the educational activities of "Electricity on the Farm" my farm-of-the-future will have electrical equipment; and, therefore, much of the possible physical drudgery and financial loss of my future agricultural life has already been eliminated. I have obtained indispensable, elementary understanding of electric mechanics. I have been benefited, indeed, by "Electricity on the Farm."

J. P. Coleman,
R.F.D., No. 2,
Weir, Miss.

* * *

As a school teacher I have made a different use of your magazine than that probably intended by its editors. In the upper grades we discuss the time-saving devices mentioned and pictured. We have made parchment shades and ceiling drums, which the children use at home. The lower grades use the jokes and cover pages. We have a cover naming contest of our own each month. Our discussions have caused the parents to read your magazine more carefully, so as to be able to answer the questions their children have to have answered at home.

Miss Hazel Plyn,
Route 2, Box 154,
Kewanee, Illinois.

* * *

Once every month a neighbor drops in—a traveler bringing news from other neighbors we have never seen. He tells us about a Californian utilizing electricity on a dairy-ranch, of an Englishman curing hay electrically, of a man and a machine preparing food for a thousand hogs. His name is "Electricity on the Farm." There are neighbors welcome at no door. There are few like this traveler always welcome, coming heavy-laden with gifts, saying, "Take, use, share. Gossip about me when you will, your gossip is my highest praise."

Minerva C. Abbott,
Oxford, O., R.R. 1.

* * *

Long years of disappearing income dampens any homemaker's spirit. Without hope of adding conveniences she even begins to stop wishing for them, and when a woman stops wishing and planning she may as well be dead. Half of life's joy is the anticipation of easier days coming. "Electricity on the Farm" has kept alive my plans for a fully equipped home. I'll have it yet! Meanwhile your magazine is keeping me informed on the latest and best household helps and I am enjoying the cheering visits of one of the brightest little magazines published.

Mrs W. S. Perrine,
Perrine Road,
Centralia, Ill.

* * *

The magazine, "Electricity on the Farm," has helped me in numerous ways. There was no electricity on my farm until the magazine started coming monthly. Reading about the wonderful things accomplished by electricity helped me to decide to install electricity. I can truly say the magazine made up my mind for me. The modern electrical practices suggested in this magazine have helped me cut expenses and reduce labor to suit the worrisome budget that would never work right before. You have my thanks and appreciation for "Electricity on the Farm."

Mrs. J. F. Axselle,
Route 4, Box 105,
Richmond, Va.

ESCO
The Electric
MILK
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increases profits, cuts costs, saves labor. Cools milk quickly to below 50° and keeps it cold.
Send for Full Information
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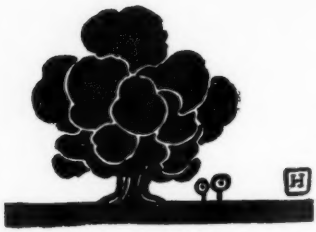


Under The CHESTNUT TREE

Congratulations

A young couple came to the manse of a popular minister to be married. After the ceremony, there was an awkward pause. The man and his bride maintained an embarrassed silence. The minister, in order to relieve the situation, said to the bridegroom: "Well, salute the bride."

Whereupon the bridegroom shook her by the hand, saying: "I congratulate you."

Details Omitted

An inmate of an insane asylum imagined himself to be an artist, and he was busily engaged in dabbling at an empty canvas with a dry brush. A visitor asked what the picture represented.

"That," said the nut, "is a picture of the Israelites being pursued through the Red Sea."

"Where is the sea?"

"Why, that's rolled back to allow the Israelites to pass."

"Where are the Israelites?"

"They've just gone by."

"Then where are their pursuers?"

"Oh, they'll be along in a minute."

Anointed

First Student: "I'll bet you were mad when you caught that skunk."

Second Student: "You bet; I was highly incensed."

Getting Information

A woman heard that her two sons were in the habit each at separate times and quite unknown to each other, of taking one of the maids "out for a lark."

Fearing to bring down on their heads the wrath of their father by making a fuss about it, she asked them if it were true, but could get no satisfactory answer to her inquiry.

It occurred to her that by a little strategy she might get the truth from the girl, so she said: "Now, Mary, I want you to answer me candidly. Which of my two sons do you like going out with best — George or Joseph?"

"Well, madam," replied the girl, reassured by her mistress's manner, "if ye must know, of the two I like George best; but for a downright good spree, give me the master!"

Hard on the Cat

Customer: "I cannot sleep at night—the least little sound disturbs me. I'm a victim of insomnia. Even a cat on our back fence distresses me beyond words."

Druggist: "This powder will be effective."

Customer: "When do I take it?"

Druggist: "You don't. Give it to the cat in milk."

Oh, Yeah!

The old commercial traveller was relating his experiences to a younger man.

"And don't forget," he said, "never try to sell an encyclopedia to a bride."

"Why not?" asked the young man.

The older man smiled cynically.

"She always thinks her husband knows everything."

Brought Him Out Alive

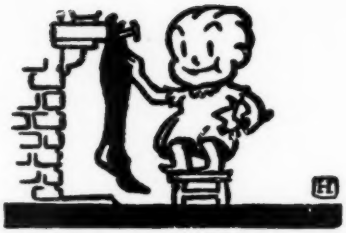
A tramp traveling through the country stopped at a farm house in Iowa and asked for something to eat. The farmer said: "Sure, you can have something to eat and a chance to make some money besides. I'll give you $100 if you will bring that bull out of the pasture, dead or alive."

"Why, I am an old bull-fighter," replied the tramp. "I can bring him out easy."

So the farmer gave the tramp a large rock and a pistol and took him over to the fence. The tramp jumped over and walked toward the bull. Then the bull started for the tramp. The tramp threw the rock and hit the bull on the head, but the bull kept coming. Then the tramp fired the pistol without effect and he started running around the field with the bull behind him. Finally the tramp was near the farmer and he shouted: "Open the gate."

"Why," asked the farmer.

"I'm bringing him out alive," replied the tramp, between breaths, at the same time increasing his speed in the direction of the gate.



Here's Christmas Cheer

—that will last for years

Put electrical gifts in the Christmas stocking this year and make everybody happy. Electrical servants make farm life more economical as well as comfortable.

Ask the manufacturers that are advertising in* ELECTRICITY ON THE FARM *to explain how they can help you. The products they offer have all proved their worth in actual farm service. Here is the list:

	See Pages
Electric Ranges	
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Malleable Iron Range Co.	5
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General Electric Company	27
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Water Systems	
Myers & Bro. Co., F. E.	3
Roper Corp., Geo. D.	
Cullman Wheel Co.	
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Water Heaters	
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For information about devices not included in the above list and the names of reliable manufacturers — use this handy coupon.

TEAR OFF HERE

ELECTRICITY ON THE FARM, 24 W. 40th St., New York

Without cost to me, please have manufacturers send complete information on the following Electrically Operated Equipment which I am thinking of buying:

....

....

My name is .....

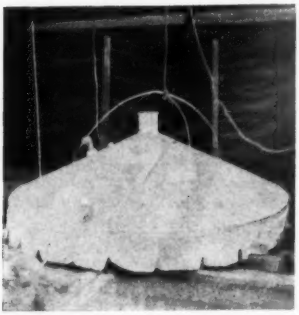
Address .....

..... 12-32

Electric Brooders

(*Continued from page* 12)

experienced by Mr. Harmon in brooding pheasants. Young pheasants are flighty and nervous and hens invariably step on some of



This is the two hundred chick size brooder used by Mr. Harmon.

their brood, which factor, coupled with the lice, mites and parasites carried by the hens, has had a tendency to increase the mortality among the hen reared broods.

The Washington State Game Farm maintains a breeding flock of some 600 game birds throughout the year and from these birds, 15,000 eggs are set each spring under the hens and in the incubators. 9,000 young birds are generally hatched and in the past have all been placed under hens for rearing.

Experience this year, however, with the homemade brooders and with a reliable manufactured brooder has caused Mr. Harmon to change his plans. The low mortality with electric brooders, the saving in loss in the purchase price of setting hens, the saving in operating cost compared with feed and labor for hens, the elimination of parasites and disease common with hens, the greater convenience and cleanliness with electric brooders, and many other factors have been responsible for this change.

It is another example of modern efficiency improving the methods of Mother Nature.

CLASSIFIED ADVERTISING

FREE BULLETIN on Electric Poultry Equipment describing Burglar Alarms, Brooders, Incubators, Heating and Thermostatic Supplies for home made equipment. Have proved they will work in your climate. Write for your copy today. LYON ELECTRIC COMPANY, 2075 Moore St., San Diego, Calif.

The PARAGON POULTRY TIME SWITCH is scientifically designed and approved by state universities. It provides automatic control both morning and night and DIMS THE LIGHT AT NIGHT to allow the hens to return to roost. Low price and UNCONDITIONALLY GUARANTEED. Write for full information today. PARAGON ELECTRIC COMPANY. Van Buren and Dearborn Sts., Chicago, Ill.

Questions and Answers

(*Continued from page* 24)

impossible to get good lighting from poles only 13′ in height. Also, the poles at the end of the court are too close to the playing field. In my opinion, the most simple and least costly method of lighting a single tennis court is to have a row of lights lengthwise over the center of the court. The installation would be as follows: two 35′ poles about 120′ apart to support a messenger cable lengthwise over the centers of the court, the distance between the ends of the court and the poles to be about 16′ or more. Suspend 5 chromium plated or porcelain enameled deep bowl reflectors on the messenger cable, the center light to be over the center of the court, the other lights spaced 22′ apart, the reflectors to be a uniform height—30′ from the ground, each reflector to be equipped with a 1,500 watt Ps-52 bulb mazda lamp.

For more detailed information, I refer you to publications on tennis court lighting by the Westinghouse Lamp Company, East Pittsburgh, Pa.; Crouse-Hinds Company, Syracuse, New York; American Appliance Company, Kalamazoo, Michigan.

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Front Cover Title Contest

You can get a lot of fun as well as profit out of these contests, our readers tell us. Everyone can participate—the rules are simple—but be sure to read them carefully. Note that your entries should be addressed to our Chicago office.

Winners of October Contest

Selecting the 11 best letters submitted in the October contest was most difficult. Those finally chosen are being published in this issue on pages 30 and 31.

The editors plan to publish additional praiseworthy letters in future issues, awarding extra prizes to the writers as the letters are published.

RULES FOR DECEMBER

There will be one first prize of $25.00 and five second prizes of $5.00 each. In case of a tie, each winning contestant will receive the full cash prize to which he or she is entitled.

All members of the farm family to whom this magazine was sent may submit titles, but each contestant may submit only one title.

Titles should not be longer than 15 words—the shorter the better—and they need not be rhymes.

Question "A" must be answered correctly.

Send your title on the coupon below or make out a similar form on a plain sheet of paper or government post card.

Entries must be sent to the Title Editor, ELECTRICITY ON THE FARM, 6 No. Michigan Ave., Chicago, Ill., before January 1st.

Winning names and titles will be announced in the February issue.

Follow these simple rules. Your Editor cannot answer letters about the contest.

My title for the December Front Cover picture of ELECTRICITY ON THE FARM is:

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.....

(a) Fill in brand name of any of the following electrically-operated appliances you now have.

Range	Vacuum Cleaner .....
Refrigerator	Milking Machine .....
Water Pump	Radio .....

My name is .....R.F.D.....

Post Office..... County..... ..... State..... 12-32

Municipal Ownership Increases Taxes

Privately owned public utilities in Indiana pay millions of dollars a year in taxes for the support of state, county, township and city governments and the public school system.

Municipal plants pay no taxes.

A proposal to extend municipal ownership of electric and other utilities in Indiana is therefore of vital interest to every farmer in the state.

Every time a city or town acquires a public utility property, that property would be taken off the tax duplicate.

That means that the amount of taxes, which had been paid on the property under private ownership would have to be made up by farmers and other taxpayers throughout the state.

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